What is claimed is:

1. A composite aluminum alloy structure comprising:

a core layer;

a water-side liner on one side of said core layer, said water-side liner comprised of between about 0.2-0.5% Si, , between about 1.3-2.5% Mg, between about 2.5-5.0% Zn, less than about 0.1% Cu, less than about 0.25% Mn and less than about 0.35% Fe, with the remainder comprising Al and tolerable impurities; and

a braze liner on the other side of said core layer.

2. The composite aluminum alloy structure of claim 1 wherein said core layer is comprised of between about 0.5-1.3% Mn, between about 0.1-0.3% Mg, between about 0.4-0.7% Cu, between about 0.15-0.5% Si, between about 0.1-0.25% Ti and less than about 0.5% Fe, with the remainder comprising Al and tolerable impurities.

3. The composite aluminum alloy structure of claim 2 wherein said braze liner is made from a brazing filler metal made from an Al-Si-base alloy.

4. The composite aluminum alloy structure of claim 2 wherein said core layer is comprised of between about 0.5-1.0% Mn, between about 0.1-0.2% Mg, between about 0.5-0.7% Cu, between about 0.15-0.28% Si, between about 0.1-0.2% Ti and less than about 0.25% Fe, with the remainder comprising Al and tolerable impurities.

5. The composite aluminum alloy structure of claim 1 wherein said water-side liner is comprised of between about 0.2-0.35% Si, less than about 0.05% Cu, less than about 0.05% Mn, between about 1.3-2.0% Mg, less than about 0.2% Fe and between about 3.0-4.5% Zn, with the remainder comprising Al and tolerable impurities.

6. The composite aluminum alloy structure of claim 1 wherein said composite aluminum alloy structure is structured for use in a heat exchanger.

7. The composite aluminum alloy structure of claim 1 wherein said water-side liner is between about 5-30% of the total thickness of said structure and said braze liner is between about 5-20% of the total thickness, with the core comprising the remaining thickness.

8. The composite aluminum alloy structure of claim 1 wherein said composite aluminum alloy structure is a tubular shape.

9. The composite aluminum alloy structure of claim 8 wherein said core layer is comprised of between about 0.5-1.3% Mn, between about 0.1-0.3% Mg, between about 0.4-0.7% Cu, between about 0.15-0.5% Si, between about 0.1-0.25% Ti and less than about 0.5% Fe, with the remainder comprising Al and tolerable impurities.

10. The composite aluminum alloy structure of claim 9 wherein said braze liner is made from a brazing filler metal made from an Al-Si-base alloy.

11. A composite aluminum alloy tubestock for use with a heat exchanger, said tubestock comprising:

a core having a first side and a second side, said core comprised of between about 0.5-1.3% Mn, between about 0.1-0.3% Mg, between about 0.4-0.7% Cu, between about 0.15-0.5% Si, between about 0.1-0.25% Ti and less than about 0.5% Fe, with the remainder comprising Al and tolerable impurities;

a water-side liner on said first side of said core, said water-side liner comprised of between about 0.2-0.5% Si, less than about 0.1% Cu, less than about 0.25% Mn, less than about 0.35% Fe, between about 1.3-2.5% Mg and between about 2.5-5.0% Zn, with the remainder comprising Al and tolerable impurities; and

a braze liner on said second side of said core, said braze liner comprised of a brazing filler metal consisting of an Al-Si-base alloy.

12. The tubestock of claim 11 wherein said Ti content in said core material is between about 0.1-0.2%.

13. The tubestock of claim 11 wherein the Mn content in said core material is between about 0.5-1.0%.

14. The tubestock of claim 11 wherein the Si content in said core material is between about 0.15-0.28%.

15. The tubestock of claim 11 wherein the Mg content in said core material is between about 0.1-0.2%.

16. The tubestock of claim 11 wherein the Cu content in said core material is between about 0.5-0.7%.

17. The tubestock of claim 11 wherein the Fe content in said core material is less than about 0.25%.

18. The tubestock of claim 11 wherein the Mn content in said water-side liner less than about 0.05%.

19. The tubestock of claim 11 wherein the Zn content in said water-side liner is between about 3.0-4.5%.

20. The tubestock of claim 11 wherein the Mg content in said water-side liner is between about 1.3-2.0%.

21. The tubestock of claim 11 wherein the Cu content in said water-side liner is less than about 0.05%.

22. The tubestock of claim 11 wherein the Si content in said water-side liner is between about 0.2-0.35%.

23. The tubestock of claim 11 wherein the Fe content in said water-side liner is less than about 0.2%.

24. The tubestock of claim 11 wherein said tubestock is structured to be formed into a substantially tubular member with an interior and an exterior; wherein said water-side liner is disposed on the interior of said substantially tubular member; and wherein said braze liner is disposed on the exterior of said substantially tubular member.

25. The tubestock of claim 11 wherein said water-side liner is between about 5-30% of the total thickness of said tubestock and said braze liner is between about 5-20% of the total thickness, with the core comprising the remaining thickness.

26. The tubestock of claim 11 wherein said tubestock is of a tubular shape.

27. The tubestock of claim 26 wherein said core layer is comprised of between about 0.5-1.0% Mn, between about 0.1-0.2% Mg, between about 0.5-0.7% Cu, between about 0.15-0.28% Si, between about 0.1-0.2% Ti and less than about 0.25% Fe, with the remainder comprising Al and tolerable impurities.

28. The tubestock of claim 26 wherein said water-side liner is comprised of between about 0.2-0.35% Si, between about 1.3-2.0% Mg, between about 3.0-4.5% Zn, less than about 0.05% Cu, less than about 0.05% Mn and less than about 0.2% Fe, with the remainder comprising Al and tolerable impurities.